

AMENDMENTS TO THE CLAIMS

1. (Previously Presented) A method for managing a defective data block of a recording medium, the method comprising:

receiving a write command for data recording, the write command comprising a logical block address to designate a recording position, a transfer length information to identify an amount of data to be recorded and write type information for indicating whether or not the real time recording is required, wherein the write command comprises 12 bytes of information including the logical block address of 4 bytes, the transfer length information of 4 bytes and the write type information of 1 bit among 1 byte;

determining whether to replace a defective data block to a spare area of the recording medium based on the write type information; and

replacing the defective data block to the spare area of the recording medium if the write type information indicates that the real time recording is not required, while not replacing the defective data block to the spare area of the recording medium if the write type information indicates that the real time recording is required, as a result of the determination.

2. (Cancelled)

3. (Previously Presented) The method of claim 1, further comprising:

identifying a number of defective data blocks found during the real time recording, in order for use in at least a next recording operation; and

updating a remaining recording capacity of the recording medium based on the number of defective data blocks, after recording the data.

4. (Previously Presented) The method of claim 1, further comprising:
recording a defect list on the recording medium, the defect list including an indication
information to indicate that the defective data block is not replaced.

5. (Cancelled)

6. (Cancelled)

7. (Previously Presented) The method of claim 4, wherein the recording step records the
defect list in a defect management area specified in the recording medium.

8. (Currently Amended) A method for managing a defective data block of a recording
medium, the method comprising:

receiving a write command for data recording, the write command comprising a logical
block address to designate a recording position, a transfer length information to identify an
amount of data to be recorded and a write type information to indicate that real time data
recording is required, wherein the write command comprises twelve bytes of information
including the write type information of 1 bit among 1 byte;

determining the recording position in the recording medium, the amount of data and the
real time recording respectively based on the write command;

controlling the recording of the data such that an optical pickup does not jump to a spare
area of the recording medium to replace a defective data block ~~to a spare area of the recording~~
~~medium;~~ and

recording a defect list on the recording medium, the defect list including an indication information to indicate that the defective data block is not replaced to the spare area, the indication information being different from the write type information and type of the recoded data but dependent on the write type information.

9. (Previously Presented) The method of claim 8, wherein the recording the defect list records the defect list in a defect management area specified in the recording medium.

10. (Currently Amended) A system for managing a defective data block of a recording medium, the system comprising:

a recording/reproducing device ~~for~~ adapted to receive a write command for real time recording and record data on the recording medium, ~~the recording/reproducing device receiving a write command for real time recording,~~ the write command comprising a logical block address information to designate a recording position, a transfer length information to identify an amount of data to be recorded and write type information to indicate that real time data recording is required, the write command comprising twelve bytes of information that includes the write type information of 1 bit among 1 byte, ~~performing the recording operation wherein the recording/reproducing device is adapted to perform the recording operation~~ to not replace the defective data block to a spare area of the recording medium during the real time recording, and ~~recording~~ record a defect list on the recording medium, the defect list including an indication information to indicate that the defective data block is not replaced, the indication information being different from the write type information and type of the recoded data but dependent on the write type information; and

a host device, operatively coupled to the recording/reproducing device through interface, for transmitting the write command to the recording/reproducing device, and controlling the recording/reproducing device to record the data according to the write command,

wherein the recording/reproducing device is adapted to recognize the write command received from the host device to perform the recording operation in response to the write command and determine ~~determines~~ the recording position in the recording medium, the amount of data and the real time recording respectively based on the write command.

11. (Currently Amended) The system of claim 10, wherein the recording/reproducing device ~~sends~~ is adapted to send a report including information to specify a number of defective data blocks found during the real time recording to the host device, and the host device ~~recognizes~~ is adapted to recognize an amount of the recorded data based on the information and ~~updates~~ update the remaining capacity of the recording medium.

12. (Currently Amended) The system of claim 10, wherein the write command comprises 12 bytes of information including the logical block address of 4 bytes, the transfer length information of 4 bytes and the write type information of 1 bit among 1 byte, and wherein the recording/reproducing device ~~recognizes~~ is adapted to recognize the specified write command to perform the recording operation.

13. (Currently Amended) The system of claim 10, wherein the write command comprises 12 bytes of information, the write type information being present on 10th byte

number, starting from byte 0 in the byte number, and the type information comprising 1 bit in the 10th byte number, and

wherein the recording/reproducing device ~~recognizes~~ is adapted to recognize the specified write command to perform the recording operation.

14. (Previously Presented) The method of claim 1, further comprising:
determining the recording position in the recording medium, the amount of data and the real time recording respectively based on the write command.

15. (Previously Presented) The method of claim 1, further comprising:
recognizing the specified write command to perform the recording of data.

16. (Previously Presented) The method of claim 8, wherein the write command comprises 12 bytes of information including the logical block address of 4 bytes, the transfer length information of 4 bytes and the write type information of 1 bit among 1 byte, further comprising:

recognizing the specified write command to control the recording of the data.

17. (Previously Presented) The method of claim 16, wherein the write command further includes a write speed information to specify the recording speed of data to be recoded, further comprising:

performing a linear replacement to the defective data block when data transfer speed is lower than the recording speed and real time processing is not required.

18. (Currently Amended) The system of claim 10, wherein the host device ~~transmits~~ is adapted to transmit the write command including write type information to indicate that the real time recording is not required, alternatively, and the recording/reproducing ~~performs~~ is adapted to perform the recording operation to replace the defective data block to the spare area of the recording medium during the non real time recording, and records a defect list on the recording medium, the defect list including an indication information to indicate that the defective data block is replaced.

19. (Currently Amended) The system of claim 10, wherein the write command further includes a write speed information to specify the recording speed of data to be recorded, and wherein the recoding/reproducing device ~~performs~~ is adapted to perform a linear replacement when data transfer speed is lower than the write speed and real time processing is not required.

20. (Currently Amended) A method for managing a defective data block of a recording medium, the method comprising:

receiving a write command for real time recording, the write command comprising a logical block address to designate a recording position, a transfer length information to identify an amount of data to be recorded and write type information to indicate that real time data

recording is required, wherein the write command comprising 12 bytes of information including the write type information of 1 bit among 1 byte;

performing a recording operation of the data in such a manner that a defective data block is not replaced to a spare area of the recording medium, during the real time recording; and

storing an identification information to indicate that the defective data block is not replaced with a spare area, the identification information being different from the write type information and type of the recorded data but dependent on the write type information.

21. (Previously Presented) The method of claim 20, wherein the performing step includes a step of skipping a defective data block and recording data in a next available block.

22. (Cancelled)

23. (Cancelled)

24. (Previously Presented) The method of claim 20, further comprising:
determining the recording position in the recording medium, the amount of data and the real time recording respectively based on the write command, before the recording operation.

25. (Previously Presented) The method of claim 20, further comprising:
identifying a number of defective data blocks found during the real time recording, in order for use in a next recording.

26. (Currently Amended) The method of claim 20, wherein the write command comprises ~~12 bytes~~, the logical block address of 4 bytes, the transfer length information of 4 bytes and the type information of 1 bit among 1 byte, among the 12 bytes, further comprising:

recognizing the specified write command to perform the recording operation.

27. (Currently Amended) The method of claim 20, wherein the write command comprises ~~12 bytes~~, the write type information being present on 10th byte number, further comprising:

recognizing the specified write command to perform the recording operation.

28. (Cancelled)

29. (Currently Amended) An apparatus for managing a defective data block, comprising:
an optical pickup adapted to record data on the recording medium; and

a controller adapted to receive a write command for recording data, the write command comprising a logical block address to designate a recording position, a transfer length information to identify an amount of data to be recorded and a write type information to indicate that real time data recording is required, the write command comprising 12 bytes of information that includes the write type information of 1 bit among 1 byte, to determine the recording position in the recording medium, the amount of data and the real time recording respectively based on the write command, to control the optical pickup to record the data such that the optical pickup does not jump to a spare area to replace a defective data block to a spare area of the recording medium, and to create a defect list on the recording medium, the defect list including an indication information to indicate that the defective data block is not replaced to the spare

area, the indication information being different from the write type information and type of the recoded data but dependent on the write type information.

30. (Currently Amended) The apparatus of claim 29, wherein the controller ~~controls~~ is adapted to control the optical pickup to record the defect list in a defect management area specified in the recording medium.

31. (Currently Amended) The apparatus of claim 29, wherein the write command comprises ~~12 bytes of information including~~ the logical block address of 4 bytes, the transfer length information of 4 bytes and the write type information of 1 bit among 1 byte, and

wherein the controller ~~recognizes~~ is adapted to recognize the specified write command to control the optical pickup.

32. (Currently Amended) The apparatus of claim 31, wherein the write command further includes a write speed information to specify the recording speed of data to be recorded, and

wherein the controller ~~controls~~ is adapted to control the optical pickup to perform a linear replacement to the defective data block when data transfer speed is lower than the recording speed and real time processing is not required.

33. (Currently Amended) An apparatus for managing a defective data block, comprising:
a recording/reproducing unit adapted to record data on the recording medium; and

a controller adapted to receive a write command to record data, the write command comprising a logical block address to designate a recording position, a transfer length information to identify an amount of data to be recorded and write type information to indicate whether real time data recording is required, the write command comprising 12 bytes of information that includes the write type of information of 1 bit among 1 byte, to perform a recording operation of the data in such a manner that a defective data block is not replaced to a spare area of the recording medium if the write type information indicates that the real time recording is required while the defective block is replaced to the spare area of the recording medium if the write type information indicates that the real time recording is not required, and to create an indication information to indicate whether or not the defective data block is replaced with a spare area, the indication information being different from the write type information and type of the recoded data but dependent on the write type information.

34. (Currently Amended) The apparatus of claim 33, wherein the controller ~~controls~~ is adapted to control the recording/reproducing unit to skip a defective data block and record data in a next available block.

35. (Currently Amended) The apparatus of claim 33, wherein the controller ~~determines~~ is adapted to determine the recording position in the recording medium, the amount of data and the real time recording respectively based on the write command, before the recording operation, thereby control the recording/reproducing unit.

36. (Currently Amended) The apparatus of claim 33, wherein the controller ~~identifies~~ is adapted to identify a number of defective data blocks found during the real time recording, in order for use in a next recording.

37. (Currently Amended) The apparatus of claim 33, wherein the write command comprises ~~12 bytes including~~ the logical block address of 4 bytes, the transfer length information of 4 bytes and the write type information of 1 bit among 1 byte, and

wherein the controller recognizes the specified write command to perform the recording operation.

38. (Currently Amended) The apparatus of claim 33, wherein the write command comprises ~~12 bytes including~~ the write type information being present on 10th byte number starting from 0 byte number, and

wherein the controller recognizes the specified write command to perform the recording operation.

39. (Cancelled)

40. (Currently Amended) A system for managing a defective data block, comprising:
a recording/reproducing device ~~for recording~~ configured to record data to a recording medium, the recording/reproducing device ~~for receiving~~ being adapted to receive a write command, the write command including a logical block address to designate a recording position

in the recording medium, a transfer length information to identify an amount of main data to be recorded and a write type information to identify whether the real time recording is required, and for determining whether to replace a defective data block to a spare area of the recording medium based on at least the write type information; and

a host device, operatively coupled to the recording/reproducing device through an interface, to control the recording of data, the host device ~~transmitting~~ being adapted to transmit the write command and the data to be written to the recording/reproducing device through the interface,

the write command comprising 12 bytes of information, which includes the logical block address of 4 bytes, the transfer length information of 4 bytes and the type information of 1 bit among 1 byte, and

wherein the recoding/reproducing device ~~recognizes~~ is adapted to recognize the specified write command to determine at least the write type, and performs the recording operation such that the defective data block is not replaced with the spare area of the recording medium if the write command identifies that the real time recording is required, while the defective data block is replaced with the spare area of the recording medium if the write command identifies that the real time recording is not required.

41. (Currently Amended) The system of claim 40, wherein the recording/reproducing device ~~records~~ is adapted to record a defect entry including a location of the defective data block and an indication information for specifying whether the defective data block is replaced with the spare area, in response to the recording operation, the indication information being different from

the write type information of the write command and type of the recoded data but dependent on the write type information, and

wherein the indication information indicates that the defective data block is not replaced to the spare area, if the recording/reproducing device receives the write command including the write type information to identify that the real time recording is required.

42. (Previously Presented) The system of claim 41, wherein the indication information indicates that the defective data block is replaced to the spare area, if the recording/reproducing device receives the write command including the write type information to identify that the real time recording is not required.

43. (Currently Amended) The system of claim 40, wherein the recording/reproducing device comprises:

an optical pickup unit ~~for recording~~ adapted to record the data on the recording medium,
a data processor ~~for processing~~ adapted to process the data and transferring transfer the processed data to the optical pickup unit, and
a control unit for controlling the recording operation of data.

44. (Currently Amended) The system of claim 40, wherein the host device ~~transmits~~ is adapted to transmit the write command comprising 12 bytes of information, which includes the type information being present on 10th byte number starting from 0 byte number, and the

recording/reproducing device ~~recognizes~~ is adapted to recognize the specified write command to perform the recording operation.

45. (Cancelled)

46. (Currently Amended) An apparatus for managing a defective data block, comprising:
a recording/reproducing unit ~~for recording~~ adapted to record data to a recording medium;
and

a control unit, operatively coupled to the recording/reproducing unit, to control the recording of data, the control unit ~~for receiving~~ being adapted to receive a write command, the write command including a logical block address to designate a recording position in the recording medium, a transfer length information to identify an amount of main data to be recorded and a write type information to identify whether the real time recording is required, and for determining whether to replace a defective data block to a spare area of the recording medium based on the write command and for controlling the recording/reproducing unit according to the determination, the write command comprising 12 bytes of information, which includes the logical block address of 4 bytes, the transfer length information of 4 bytes and the type information of 1 bit among 1 byte, and

wherein the control unit ~~recognizes~~ is adapted to recognize the specified write command to determine at least the write type, and controls the recording/reproducing unit such that the defective data block is not replaced with the spare area of the recording medium if the write command identifies that the real time recording is required, while the defective data block is

replaced with the spare area of the recording medium if the write command identifies that the real time recording is not required.

47. (Currently Amended) The apparatus of claim 46, wherein the control unit ~~controls~~ is adapted to control the recording/reproducing unit to record a defect entry including a location of the defective data block and an indication information for specifying whether the defective data block is replaced with the spare area, in response to the recording operation, the indication information being different from the write type information of the write command and type of the recoded data but dependent on the write type information, and

wherein the indication information indicates that the defective data block is not replaced to the spare area, if the control unit receives the write command including the write type information to identify that the real time recording is required.

48. (Previously Presented) The apparatus of claim 47, wherein the indication information indicates that the defective data block is replaced to the spare area, if the control unit receives the write command including the write type information to identify that the real time recording is not required.

49. (Currently Amended) The apparatus of claim 46, wherein the control unit ~~receives~~ is adapted to receive the write command comprising 12 bytes of information, which includes the type information being present on 10th byte number starting from 0 byte number, and recognizes

the specified write command to control the recording/reproducing unit according to the write command.

50. (Cancelled)